

Serial No.: 10/692,079
Group Art Unit 2611

Docket No. PU030092
Customer No. 24498

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Listing and Amendments to the Claims

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This listing of claims will replace all prior versions, and listings, of claims in the application.

1 1. (original) A method for sampling a digital signal yielding improved jitter
2 performance within prescribed bandwidth constraints, comprising the steps of:
3 periodically sampling the digital signal n times during every interval t , with n chosen such
4 that $\log_2(n+1)$ is an integer (x) greater than zero;
5 generating a $x+1$ -bit sample value after each interval t , the sample value having a first bit
6 indicating the value of the digital signal being sampled, and x remaining bits which collectively
7 indicate a sample interval during which the digital signal changed states if such a change did
8 occur, and
9 inverting the first bit of each sample value upon decoding to coincide with the change in
10 the digital signal.

1 2. (original) The method according to claim 1 wherein $n=15$ and x equals 4.

1 3. (currently amended) An Apparatus for sampling a digital signal yielding
2 improved jitter performance within prescribed bandwidth constraints, comprising of:
3 a sample clock for generating n periodic clock pulses during every interval t , with n
4 chosen such that $\log_2(n+1)$ is an integer (x) greater than zero;
5 a receiver for generating a $x+1$ -bit sample value after each interval t , the sample value
6 having a first bit indicating the value of the digital signal being sampled, and x remaining bits
7 which collectively indicate a sample interval during which the digital signal changed states if
8 such a change did occur, and the receiver inverting the first bit of each sample value upon
9 decoding to coincide with the change in the digital signal.

1 4. (original) The apparatus according to claim 1 wherein $n=15$ and x equals 4.

1 5 (previously presented) A method for sampling a digital signal yielding improved
2 jitter performance within prescribed bandwidth constraints, comprising the steps of:
3 periodically sampling the digital signal n times during every interval t , with n chosen such
4 that $\log_2(n) \leq x$ where x is an integer;

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5 generating a $x+1$ -bit sample value after each interval t , the sample value having a first bit
6 indicating the value of the digital signal being sampled, and x remaining bits which collectively
7 indicate a sample interval during which the digital signal changed states if such a change did
8 occur, and
9 inverting the first bit of each sample value upon decoding to coincide with the change in
10 the digital signal.

1 6. (previously presented) The method according to claim 5 wherein $n=15$ and x
2 equals 4.

1 7. (currently amended) An Apparatus for sampling a digital signal yielding
2 improved jitter performance within prescribed bandwidth constraints, comprising of:
3 a sample clock for generating n periodic clock pulses during every interval t , with n
4 chosen such that $\log_2(n) \leq x$ where x is an integer
5 a receiver for generating a $x+1$ -bit sample value after each interval t , the sample value
6 having a first bit indicating the value of the digital signal being sampled, and x remaining bits
7 which collectively indicate a sample interval during which the digital signal changed states if
8 such a change did occur, and the receiver inverting the first bit of each sample value upon
9 decoding to coincide with the change in the digital signal.

1 8. (new) The apparatus according to claim 7 wherein $n=15$ and x equals 4.